

MINUTES
JOINT MEETING
SENATE STATE AFFAIRS COMMITTEE
HOUSE ENVIRONMENT, ENERGY & TECHNOLOGY COMMITTEE

DATE: Monday, January 16, 2017

TIME: 1:30 P.M.

PLACE: WW02-Lincoln Auditorium

MEMBERS PRESENT: Chairman Siddoway, Vice Chairman Hagedorn, Senators Davis, and Winder

Chairman Raybould, Vice Chairman Thompson, Representatives Hartgen, Vander Woude, Anderson, Anderst, Mendive(Mendive), Trujillo, Chaney, Nate, Cheatham, Reed(Horman), Malek, Moon, Nye(Smith), Jordan (5), Rubel

ABSENT/ EXCUSED: Senators Hill, Lodge, Lakey, Stennett, and Buckner-Webb

NOTE: The sign-in sheet, testimonies and other related materials will be retained with the minutes in the committee's office until the end of the session and will then be located on file with the minutes in the Legislative Services Library.

CONVENED: **Chairman Raybould** called the Joint Meeting of the Senate State Affairs Committee and House Environment, Energy and Technology Committee (Committees) to order at 1:32 p.m.

Chairman Raybould welcomed all those in attendance and introduced Dr. Mark Peters, Director of the Idaho National Laboratory (INL), to give his presentation (see attachment 1).

PRESENTATION: **Dr. Peters** stated that the Idaho National Laboratory (INL) is comprised of a Research and Education Campus in Idaho Falls and 890 square miles of Idaho land. They operate three reactors and are ready to start a fourth. INL includes paved roads, railroad lines, electrical transmission and distribution lines and a mass transit system. The infrastructure contains buildings, fire stations, reactors, nuclear and radiological facilities, spent fuel pools, and 300 metric tons of used fuel. The Idaho Falls campus is a cutting-edge facility.

INL is the 6th largest private employer in Idaho. In 2016 it employed 4,211 people in Idaho with an average base salary of \$92,660. INL had a significant positive economic impact on the State of Idaho and served over 13,000 visitors in fiscal 2016. Funding came largely from the U.S. Department of Energy with 48% of the total funding source, 19% from the National Nuclear Security Administration, and the remaining portion came from a combination of other agencies. Financial projections for FY-2017 are positive and INL is committed to using taxpayer's dollars wisely. Great science and technology can only be done with world class infrastructure and INL is committed to that priority. There are many labs that do basic science and some that do applied science; INL does the whole spectrum. Three pillars of simultaneous excellence shape the future of INL as a research, development, demonstration, and deployment national laboratory.

Dr. Peters indicated there will be additional investment in the buildings at the Integrated Research Center (Idaho Falls campus) and also in two new buildings that are being built in conjunction with the State Board of Education for a Cybercore Integration Center and the Collaborative Computing Center. Both of these areas are growing and more space is needed for the researchers as well as research facilities.

These facilities would have a positive economic benefit to the area. While the INL has a growing workforce, there is also a segment that is aging. They will need to work closely with the educational institutions to develop the next generation of talent. New plans for training these and other types of unique talent are going to require INL to work with educators to accomplish this task. INL is focusing on bringing more interns, graduate students, and postdoctoral students to do research at their facility.

Dr. Peters explained that INL is collaborating with partnerships in four areas: nuclear energy competitiveness and leadership; integrated nuclear fuel cycle solutions; a regional clean energy system; and cyber and physical security organized around the Cybercore Integration Center.

INL's vision is to change the world's energy future and secure their critical infrastructure. Their mission is to discover, demonstrate, and secure innovative nuclear energy solutions, other clean energy options, and develop critical infrastructure. INL has a strategic plan to help them reach their goals.

Representative Anderson questioned what contributed to the increase in salaries from \$88,000 to over \$92,000. **Dr. Peters** stated that the increase came from hiring new support people, scientists, and engineers and from raising salaries to be competitive.

Representative Anderson asked why INL was building two new buildings on the campus in conjunction with the State Board of Education. **Dr. Peters** responded that INL felt the value to INL as well as the State universities and the State was significant. The buildings could be constructed more quickly and for less cost by partnering with the State Board of Education.

Representative Anderson inquired about the controversy over bringing radioactive material into INL to test and the result that it has had on INL. **Dr. Peters** stated that the issue has not been resolved and the Attorney General's position is that until such time as the integrated waste treatment unit is operating, INL will not be allowed to bring in new materials to test. He indicated that this has a direct negative impact on their ability to do new research now and over the long term.

Representative Trujillo asked if negotiations would go forward with the opening of the Waste Isolation Pilot Plants (WIPP). **Dr. Peters** indicated that it only allows treated material that is currently on site to be moved and it will not address issues related to the integrated waste treatment unit.

Representative Ruebel inquired about the possibility of INL partnering with institutions of higher learning to provide co-operative programs for students in Idaho as well as other states. **Dr. Peters** indicated that INL would be excited to have a co-op program in conjunction with the universities.

Senator Winder asked what the role of the universities is in the building program and what are the benefits. **Dr. Peters** stated that Boise State University, Idaho State University, and the University of Idaho all have their own computing capabilities on campus, but being able to use INL high performance computing would be a great benefit. By bringing in the next generation of computers it would allow Idaho universities to stay on the edge of technology. Collaboration space could be shared and the ability to attract great people would be an added benefit. An example is the area of cyber security, where INL would be able to understand the problems from conception to testing. INL and the universities each have unique capabilities that complement each other and are exciting for the next generation of students.

Representative Hartgen questioned the ownership, plans for leasing, and whether the money for these new buildings would come from State or private sector money. **Dr. Peters** responded that the buildings would be bonded by the State and leased back to INL who would continue to pay for the leases for as long as they used them.

Representative Hartgen inquired about the estimated cost of the buildings over time. **Dr. Peters** stated that the total cost was \$80 million. **Representative Hartgen** asked what the low point of growth was. **Dr. Peters** said it was approximately \$800 million dollars and occurred during the federal sequestration time period.

Representative Thompson questioned the number of years required to pay for the buildings and if INL would still have access after that time. **Dr. Peters** responded that payback time would be 15 years and after that time INL would continue to rent the buildings. **Representative Thompson** asked Dr. Peters if he saw any problems with taking on this project. **Dr. Peters** stated that he was convinced that there would be growth in both the computing and cyberspace areas and INL would be committed to follow through.

Senator Hagedorn voiced some concern with the viability of this project since there are so many entities entering the cyber security world. **Dr. Peters** responded that INL has significant backing from the Department of Defense (DOD) and most of the resources coming from the DOD is going to this particular area.

PRESENTATION: **Chairman Raybould** introduced Mike McGough, Chief Commercial Officer of NuScale Power and turned the time to him for his presentation. (Attachment 2)

Mr. McGough began his presentation with a brief overview of the company. NuScale Power is the first of current U.S. Small Modular Reactors (SMRs) to begin design of commercial Nuclear Power Plants (NPP). A NuScale Power Module (NPM) includes the reactor vessel, steam generators, pressurizer, and containment in an integral package that eliminates reactor coolant pumps and large bore piping.

Mr. McGough presented a NuScale Technology Overview and explained how to determine whether and how it works. It takes three things to make the big plant design work: conduction, convection, and gravity. These components always work at Nuscale and that is what makes this plant very different from others. NuScale has built all of the components and tested them individually and then tested them as an integrated system. Safety is an important issue to NuScale Power. **Mr. McGough** discussed issues concerning safety. Safety is measured in nuclear plants by the probability of an event that causes damage to the nuclear core.

There are many challenges and opportunities facing NuScale in the upcoming years. **Mr. McGough** discussed what is needed for NuScale to be successful in Idaho and what it will mean for our State.

Chairman Raybould introduced Ted Rampton, Chief Governmental Affairs Officer and Project Lead, from the Utah Associated Municipal Power Systems (UAMPS). (Attachment 3)

PRESENTATION: **Mr. Rampton** UAMPS is an energy services inter-local agency created in 1980 under Utah statutes. It is comprised of 47 members in seven western states. It is a project-based, energy services related, non-profit organization. Several types of energy resources are used in their projects, the largest being hydro energy at 28%. The future of coal fueled generation, the future of power markets, and the future of natural gas fueled generation are all concerns of UAMPS.

Mr. Rampton discussed the Carbon Free Power Project (CFPP) and the approach UAMPS plans to take to ultimately construct and operate the project. He indicated that they would take a three pronged approach on how to de-risk UAMPS' exposure to carbon regulation. It would include investigation of nuclear small modular reactors, energy efficiency, and distributed generation (rooftop solar). **Mr. Rampton** stated that UAMPS was aware of past and present environmental regulatory pressures and has a plan to deal with current environmental regulations.

In conclusion, **Mr. Rampton** stated that there is a need for CFPP as a reliable replacement for carbon dioxide emitting generation sources. NuScale's technology has promise to be a cost competitive resource with reduced exposure to future environmental regulations. There are currently four acceptable sites being considered for location of the CFPP project. The next steps in the selection process are to continue engagement with the Shoshone-Bannock Tribes and various Idaho State governmental offices. There would be significant regional economic development potential upon approval of CFPP. The future schedule would include: plant licensing between 2017-2022; site mobilization, construction, and startup during 2020-2026; and commercial operations beginning in 2026.

Representative Hartgen voiced concern that modules were being immersed in underground water because of the danger to aquifers. **Mr. McGough** stated that the NuScale plan has a "dry cooling" technique which uses electrical driven fans as opposed to using water for cooling. It is currently being evaluated for effectiveness. **Mr. Rampton** commented that a cooling study is being conducted that would minimize the amount of water drawn from the eastern Snake River aquifer.

Senator Hagedorn asked what kind of technology capabilities were being built into their plan for long term use. **Mr. McGough** said that NuScale's strategy is to use standard water reactor coolant and standard enriched uranium oxide fuel. Since the regulator is familiar with both, those two things have been removed from serious questioning because they have a lot of history with other technologies. NuScale believes it will add 10 years per variable to the licensing scope once those plants reach some stage of design maturation.

Representative Raybould thanked the speakers for their participation and the information they provided.

ADJOURNED: **Representative Raybould** adjourned the meeting at 2:45 p.m.

Senator Siddoway
Chairman

Twyla Melton, Secretary

Sharon Pennington, Assistant Secretary